PART 5. CHAPTER 3

RADIOLOGICAL HEALTH

SUBCHAPTER 1. RADIATION PROTECTION

Section:

- 5-301. Purpose.
- 5-302. Scope.
- 5-303. Definitions.
- 5-304. Exemptions.
- 5-305. Standards.
- 5-306. Inspections.
- 5-307. Notice of violation in writing.
- 5-308. Enforcement.
- 5-309. Appeal.
- 5-310. Registration.
- 5-311. Transportation.

SUBCHAPTER 2. X-RAY SHOE FITTING

5-321. Prohibition of X-ray shoe fitting devices.

SUBCHAPTER 1. RADIATION PROTECTION

Section 5-301. Purpose.

The Board of Health finds that ionizing radiation and sources thereof relate to public health and the preservation of public health requires the promulgation of rules and regulations pertaining to such radiation and sources thereof.

This regulation establishes standards for protection against radiation hazards associated with sources of ionizing radiation.

Source. Regulation for Radiation Protection.

Effective. December 10, 1977.

Authority. 18 V.S.A. Sec. 102 and 18 V.S.A. Chapter 32.

Section 5-302. Scope.

This regulation applies to all persons who receive, possess, use or transfer sources of ionizing radiation except that nothing in these regulations shall be construed to limit the kind or amount of radiation that may be applied intentionally to a patient for diagnostic or therapeutic purposes by or under the direction of a practitioner of the healing arts licensed by the State of Vermont as follows:

- (A) A person licensed to practice chiropody.
- (B) A person licensed to practice chiropractic.
- (C) A person licensed to practice dentistry.
- (D) A person licensed to practice medicine and surgery.
- (E) A person licensed to practice osteopathy.

Section 5-303. Definitions.

- (A) "As low as is reasonably achievable", for the purpose of this regulation means as low as is reasonably achievable taking into account the state of technology at or available to Vermont Yankee and the economics of improvements in relation to the benefits to the public health and safety and in relation to the utilization or atomic energy in the public interest.
- (B) "Background radiation", for the purposes of this regulation, means the natural radioactivity of the atmosphere that results from the presence of radioactive materials which originate either from radioactive minerals in the earth's crust or from the interaction of cosmic radiation with the gases of the atmosphere. It also includes the radioactivity contributed by atmospheric nuclear weapons testing programs.
- (C) "Board" means Vermont Board of Health.
- (D) "Curie" (Ci) is defined as 3.7×10^{10} disintegrations per second. Commonly used submultiples of the Curie are milliCurie (mCi) and the microCurie (μ Ci):
 - 1. One milliCurie = 0.001 Curie
 - 2. One microCurie = 0.000001 Curie
- (E) "Dose" means the quantity of radiation absorbed, per unit of mass, by the body or any portion of the body.
- (F) "Individual" means any human being.
- (G) "Unrestricted Area" means any area, access to which is not controlled by the owner or person having possession of any source of ionizing radiation, for purposes of protection of individuals from exposure to radiation and radioactive materials, or to any area used for residential quarters.
- (H) "Ionizing radiation" means gamma rays and X-rays, alpha and beta particles, high speed electrons, neutrons, protons and other nuclear particles, but not sound or radio waves or visible, infrared, or ultraviolet light.
- (I) "Radioactive materials' means all materials that are determined to be a source of ionizing radiation.
- (J) "Radioactive materials' (radioactivity) is commonly, and for purposes of this regulation, is measured in terms of disintegrations per unit time or in Curies.
- (K) "Rem" means a measure of the dose of any ionizing radiation to body tissue in terms of its estimated biological effect relative to a dose of one Roentgen (R) of X-rays. A commonly used submultiple of the rem is the millirem (mrem):
 - 1. One millirem (mrem) = 0.001 rem

For the purpose of this regulation any of the following is considered to be equivalent to a dose of one rem:

- 1. A dose of 1 R due to X- or gamma radiation.
- 2. A dose of 1 rad due to X-, gamma or beta radiation.
- 3. A dose of 0.1 rad due to neutrons or high energy protons.
- 4. A dose of 0.05 rad due to particles heavier than protons and with sufficient energy to reach the lens of the eye.

Section 5-304. Exemptions.

The following materials, machines and conditions are exempt from these regulations:

- (A) Radioactive materials of an equivalent specific radioactivity not exceeding that of natural potassium. (10⁻⁹ Curies per gram of potassium).
- (B) (1) Quantities of byproduct materials exempted from licensing requirements of the U.S. Nuclear Regulatory Commission as defined in Code of Federal Regulations, Title 10, Parts 30.15, 30.16, 30.18 and 30.71.
 - (2) Sealed sources of radium of one microCurie or less, and unsealed sources of radium of 0.1 microCurie or less, providing the user does not possess more than 10 such quantities.
 - (3) Quantities of source material for which the U.S. Nuclear Regulatory Commission has issued a general license in Code of Federal Regulations, Title 101, Part 40.22.
 - (4) Quantities of accelerator produced radionuclides not exceeding the quantities listed in Code of Federal Regulations, Title 10, Part 30.71 or for nuclides not listed therein, not exceeding 10 microCuries.
- (C) Domestic television receivers, providing the dose rate at 5 cm from any outer surface is less than 0.5 mrem per hour.
- (D) Other electrical equipment that produces radiation incidental to its operation for other purposes, providing the dose rate to the whole body at the point of nearest approach to such equipment when any external shielding is removed does not exceed 0.5 rem per year. The production testing or factory servicing of such equipment shall not be exempt.
- (E) Radiation machines which cannot be used in such manner as to produce radiation. (For example, X-ray machines in transport or electrical equipment in storage).
- (F) Radioactive material, except as specified in Section 5-311, being transported across the state in conformance with regulations of any Federal agency having jurisdiction over safety in interstate commerce.
- (G) Excreta from individuals undergoing medical diagnosis or therapy with radioactive materials are exempt from any limitation contained in this regulation.
- (H) Other sources of radiation that the agency finds should be exempted.

Section 5-305. Standards.

- (A) The Division of Occupational Health, Vermont Department of Health shall use the recommendations contained in the reports of the National Council on Radiation Protection and Measurements and the handbooks of the National Bureau of Standards as standards and bases for calculations to obtain and maintain safe conditions within the meaning of the regulation.
 - (1) (a) Entrance Skin Exposure Criteria (ESEC) for non-specialty radiographic examinations shall not be exceeded when technical factors for an average adult patient (Standard person—defined below) are utilized.
 - 1) <u>P.A. Chest</u>: ESEC shall not exceed 30 milliRoentgens per radiograph. Radiation exposure at the patient's skin of 15 milliRoentgens or less per radiograph is strongly recommeded.
 - 2) <u>Lateral Skull</u>: ESEC shall not exceed 300 milliRoentgens per radiograph. Radiation exposure at the patient's skin of 200 milliRoentgens or less per radiograph is strongly recommended.
 - 3) <u>A.P. Abdomen</u>: ESEC shall not exceed 750 milliRoentgens per radiograph. Radiation exposure at the patient's skin of 500 milliRoentgens or less per radiograph is strongly recommended.
 - 4) <u>A.P. Cervical Spine</u>: ESEC shall not exceed 250 milliRoentgens per radiograph. Radiation exposure at the patient's skin of 175 milliRoentgens or less per radiograph is strongly recommended.
 - 5) <u>A.P. Thoracic Spine</u>: ESEC shall not exceed 900 milliRoentgens per radiograph. Radiation exposure at the patient's skin of 600 milliRoentgens or less per radiograph is strongly recommended.
 - 6) <u>A.P. Lumbar Spine</u>: ESEC shall not exceed 1000 milliRoentgens per radiograph. Radiation exposure at the patient's skin of 675 milliRoentgens or less per radiograph is strongly recommended.
 - 7) A.P. Retrograde Pyelogram: ESEC shall not exceed 900 milliRoentgens per radiograph. Radiation exposure at the patient's skin of 600 milliRoentgens or less per radiograph is strongly recommended.
 - 8) <u>Dental (Bitewing or Periapical)</u>: ESEC shall not exceed 700 milliRoentgens per radiograph. Radiation exposure at the patient's skin of 350 milliRoentgens or less per radiograph is strongly recommended.

(b) A standard person, for purposes of this regulation, is defined as an individual meeting the following anthropometric guidelines for the radiographic examination projection specified.

Body Part	Thickness of Part	Examination Description
Thorax	23 centimeters	P.A. chest
Head	15	Lateral Skull
Abdomen	23	A.P. Abdomen
Neck	13	A.P. Cervical Spine
Thorax	23	A.P. Thoracic Spine
Abdomen	23	A.P. Lumbar Spine
Abdomen	23	A.P. Retrograde Pyelogram

(c) Actual patient skin doses may exceed those shown for the standard person or for correlated doses for persons of greater or lesser anthopometric measurements if the attending practitioner of the healing arts determines that clear and present medical/dental necessity requires such dosage increase. A written, signed statement by the practitioner explaining the need for increased patient dosage shall become a permanent part of the patient's medical/dental record.

ADVISORY NOTE: The following Entrance Skin Exposure Criteria measurement protocol will be used by the State Health Department personnel to obtain data for regulatory purposes:

- 1) A calibrated integrating radiation measuring device is placed in the center of the primary X-ray field at the location of entrance skin of a standard person for determination of exposure in air.
- Technical factors and other parameters such as field size and source-toreceptor distance are determined for a specific examination of a standard person.
- 3) For photo-timed X-ray equipment, a phantom designed to simulate attenuation of a standard person is placed between the radiation measuring device and the photo-time sensing element in a manner to minimize backscatter.
- 4) The radiographic equipment is energized (without patient) and the radiation measuring device reading is recorded for compliance purposes.
- (2) (a) Specific area gonad shielding on patients during medical diagnostic X-ray procedures shall have a lead equivalent of at least 0.25 mm and shall be required when the following conditions exist:
 - 1) The gonads will lie within the primary X-ray field or within close proximity (5 centimeters) despite proper beam limitation.

ADVISORY NOTE: Specific area testicular shielding also should be used during examinations of the abdominal region in which the testes may lie

close to the primary X-ray field. Examples of such examinations include lumbar spine, intravenous pyelogram, and abdomen films.

2) The clinical objectives of the examination will not be compromised.

ADVISORY NOTE: Each X-ray facility should compile a list of radiographic examinations for which gonad shielding is appropriate. Specific area ovarian shielding should be used during any examination of the abdominal region when such shielding will not obscure visualization of adjacent structures required by the examination. Specific area testicular shielding should be used for all examinations of male patients in which the pubic symphysis will be visualized on the film and when such shielding will not obscure visualization of adjacent structures required by the examination.

- 3) The patient has a reasonable reproductive potential.
- (3) Special dose limiting requirements.
 - (a) Protection of the embryo or fetus during radiological examination of women known to be pregnant shall be given special consideration.

ADVISORY NOTE: It is recommended that radiologic examinations of the abdomen and pelvis which do not contribute to the diagnosis of pregnant or potentially pregnant women in relation to their current illness be restricted to the first 10 days of the menstrual cycle in the case of potentially pregnant individuals and avoided entirely during known pregnancy. The attending practitioner of the healing arts retains full and complete discretion to carry out any radiographic examination considered medically necessary without regard for the phase of the menstrual cycle or fetal presence.

- (b) During the entire gestation period, the maximum permissible dose equivalent to the fetus from occupational radiation exposure of the expectant mother shall not exceed 0.5 rem.
 - ADVISORY NOTE: Annual dose accumulation should be kept below 2 or 3 rems acquired at a more or less steady rate. In such cases, the probability of the dose to a fetus exceeding 0.5 rem before a pregnancy is recognized is small.
- (c) Maximum Permissible Dose Equivalent for minors under 18 years of age shall not exceed 0.1 rem per year from occupational radiation exposure or from radiation exposure received during educational or training activities. This is to be considered to be a part of the annual dose limit of 0.5 rem appropriate for an individual in the general public, and not supplemental to it.

- (B) Notwithstanding part (A) of this section, exposure of individuals in unrestricted areas to radiation and radioactive materials from the Vermont Yankee Nuclear Power Station shall be kept as low as is reasonably achievable.
 - (1) Discharges of radioactive materials and direct gamma radiation to unrestricted areas shall be controlled as follows:

(a) Gaseous Effluents

- 1) The annual dose objective for the total-body of an individual in an unrestricted area due to plant emissions of radioactive noble gases is 5 millirems. For the purpose of this objective an annual average release rate of 1 percent of the maximum allowable release rate as defined in (B)(1)(a) 2) will be considered equivalent to a dose of 5 millirems per year.
- 2) The maximum release rate of any mixture of radioactive noble gases from the plant shall not exceed 0.08/Ε̄γ Ci/sec, where Ε̄γ is the average gamma decay energy for the gaseous effluent mixture in MeV/disintegration.
- 3) If a routine surveillance check as described in Vermont Yankee Technical Specifications reveals that the maximum release rate limit of Section 5-305 (B)(1)(a) 2) has been exceeded, an orderly shutdown shall be initiated and the reactor shall be in the cold shutdown condition within 24 hours.
- 4) If the release rate of any mixture of radioactive noble gases, averaged over a calendar quarter, exceeds 4 percent of the limit defined in (B)(1)(a) 2) the actions described in (B)(2) shall be taken.
- 5) If the release rate of any mixture of radioactive noble gases, averaged over a calendar quarter, exceeds 8 percent of the limit defined in (B) (1)(a) 2) the actions described in (B)(3) shall be taken.

(b) Liquid Effluents

- 1) The annual dose objective for the total-body or any organ of an individual in an unrestricted area, due to plant discharges of liquid effluents is 5 millirems. For the purpose of this objective an annual release of 1 percent of the maximum allowable concentrations as defined in (B)(1)(a) 2) through 4) will be considered equivalent to a dose of 5 millirems per year.
- 2) The maximum concentration of radioactive material, except tritium and dissolved noble gases, at the point of discharge to the Connecticut River shall not exceed 1 x 10⁻⁷ μCi/ml unless the discharge is controlled on a radionuclide basis in accordance with Appendix B, Table II, Column 2 of 10 CFR 20 and notes 1 5 thereto.
- 3) The maximum concentration of tritium at the point of discharge to the Connecticut River shall not exceed 3 x $10^{-3} \,\mu\text{Ci/ml}$.
- 4) The maximum concentration of dissolved noble gases at the point of discharge to the Connecticut River shall not exceed 4 x 10⁻⁵ μCi/ml.
- 5) If the limits defined in Section 5-305 (B)(1)(b) 2) through 4) cannot be met, radioactive liquid effluents shall not be released.

- 6) If the concentrations of radioactive materials in liquid effluents, when averaged over a calendar quarter, except tritium and dissolved noble gases, exceeds 2 percent of the limits defined in (B)(1)(b) 2) the actions described in (B)(2) shall be taken.
- 7) If the average concentration of tritium exceeds 6 x 10⁻⁵ μCi/ml or the average concentration of dissolved noble gases exceeds 8 x 10⁻⁷ μCi/ml during a calendar quarter, the actions described in Section 5-305 (B)(2) shall be taken.
- 8) If the concentrations of radioactive materials in liquid effluents, when averaged over a calendar quarter, except tritium and dissolved noble gases, exceeds 4 percent of the limits defined in (B)(1)(b) 2) the actions described in (B)(3) shall be taken.
- 9) If the annual average concentration of radioactive materials released during a calendar quarter exceeds 1 x 10⁻⁴ μCi/ml for tritium or 2 x 10⁻⁶ μCi/ml for dissolved noble gases, the actions described in (B)(3) shall be taken.

(c) Radioiodine

- 1) The annual dose objective for the thyroid of an individual in an unrestricted area due to plant emissions of radioiodine is 5 millirems. For the purpose of this objective, the release rate of radioiodine-131 shall be determined from the sum of analyses of the stack charcoal cartridge and the stack particulate filter for iodine-131. Furthermore, an annual average release rate of 1 percent of the maximum release rate as defined in (B)(1)(c) 2) will be considered equivalent to a thyroid dose of 5 millirems, based on the above analyses.
- 2) The maximum release rate of iodine-131 from the plant shall not exceed $0.57 \,\mu\text{Ci/sec}$.
- 3) If a routine surveillance check as described in Vermont Yankee Technical Specifications reveals that the maximum release rate limit of Section 5-305 (B)(1)(c) 2) has been exceeded, an orderly shutdown shall be initiated and the reactor shall be in the cold shutdown condition within 24 hours.
- 4) If the release rate of iodine-131, averaged over a calendar quarter, exceeds 2 percent of the limit defined in (B)(1)(c) 2), the actions described in (B)(2) shall be taken.
- 5) If the release rate of iodine-131, averaged over a calendar quarter, exceeds 4 percent of the limit defined in (B)(1)(c) 2) the actions described in (B)(3) shall be taken.

(d) Radioactive Particulates

- 1) The annual dose objective for any organ of an individual in an unrestricted area due to plant emissions of radioactive particulates is 5 millirems. For the purpose of this objective, an annual average release rate of 1 percent of the maximum release rate as defined in Section 5-305 (B)(1)(d) 2) will be considered equivalent to a dose of 5 millirems per year.
- 2) The maximum release rate of radioactive particulates with half lives greater than 8.1 days, shall not exceed 1.6 x 10³ MPCa Ci/sec where MPCa is the

- composite maximum permissible concentration in air as determined in Appendix B, Table II, Column I of 10 CFR, Part 20 and notes 1 5 thereto.
- 3) If a routine surveillance check, as described in Vermont Yankee Technical Specifications, reveals that the maximum release rate limit of Section 5-305 (B)(1)(d) 2) has been exceeded, an orderly shutdown shall be initiated and the reactor shall be in cold shutdown condition within 24 hours.
- 4) If the release rate of radioactive particulates with half lives greater than 8.1 days, averaged over a calendar quarter, exceeds 2 percent of the limits specified in Section 5-305 (B)(1)(d) 2) the actions described in (B)(2) shall be taken.
- 5) If the release rate of radioactive particulates with half lives greater than 8.1 days, averaged over a calendar quarter, exceeds 8 percent of the limits defined in Section 5-3-5 (B)(1)(d) 2), the actions described in (B)(3) shall be taken.

(e) Direct Gamma Radiation

- The annual dose objective for the total-body of an individual in an unrestricted area due to plant emanations of gamma radiation is 5 millirems.
 For the purpose of this objective, 20 millirems per year at any point on the site boundary bordered by land shall be considered equivalent to a 5 millirem dose at the nearest residences in Vermont.
- If any site boundary, bordered by land, quarterly average dose exceeds 10 millirems above background radiation, the actions described in (B)(2) shall be taken.
- 3) If any site boundary, bordered by land, quarterly average dose exceeds 20 millirems above background radiation, the actions described in (B)(3) shall be taken.
- (2) If the radioactive materials discharged from Vermont Yankee exceed the rates, concentrations or quantities as defined in Subsections (B)(1)(a) 4), (B)(1)(b) 6), (B)(1)(b) 7), (B)(1)(c) 4), (B)(1)(d) 4), or (B)(1)(e) 2) of Section 5-305 of these regulations, Vermont Yankee management shall, as soon as it is evident that the quarterly average of any discharge will exceed these levels:
 - (a) Make an investigation to identify the causes of such release rates or radiation levels.
 - (b) Define and initiate a program to reduce such releases to within the objectives defined in (B)(1)(a) 1), (B)(1)(b) 1), (B)(1)(c) 1), (B)(1)(d) 1) and (B)(1)(e) 1).
 - (c) Report these actions to the State of Vermont Board of Health within 14 days of the date it became evident that the levels listed in (B)(2) would be exceeded, but in no event later than 10 days after the end of the calendar quarter; the report shall include submission of the plan for corrective action, to be approved by the Board of Health
 - (d) Implement the approved plan with all reasonable speed.

- (3) If the radioactive materials discharged from Vermont Yankee exceed the rates, concentrations, or quantities defined in Subsections (B)(1)(a) 5), (B)(1)(b) 8), (B)(1)(b) 9), (B)(1)(c) 5), (B)(1)(d) 5), or (B)(1)(e) 3) of Section 5-305 of these regulations, Vermont Yankee shall take the following actions as soon as it becomes evident that the quarterly average of discharges will exceed these levels, but in no event later than the last day of the calendar quarter in which the average discharge exceeds these levels.
 - (a) Make an investigation to identify the causes of the discharge which exceeded the levels listed in (B)(3) above, and initiate a program designed to insure that future discharges will be maintained at or below the levels listed in (B)(2) above.
 - (b) Immediately report the quarterly average discharge rates to the Vermont Board of Health, together with the action taken or proposed to be taken to achieve immediate reduction of the discharges.
 - (c) Within 14 days, but in no event later than 10 days after the end of the calendar quarter, report the actions described in (B)(3)(a) above to the Vermont Board of Health for the Board's approval.
- (C) Persons within the scope of this regulation, other than as described in Section 5-305 (A) and (B), shall control all sources of radiation by using the applicable recommendations contained in the reports of the National Council on Radiation Protection and Measurements and the National Bureau of Standards handbooks as standards and bases for calculations

Section 5-306. Inspections.

- (A) All persons who receive, possess, use or transfer sources of ionizing radiation shall:
 - (1) Provide the Director of the Occupational Health Division, or his authorized representative, with copies of all reports furnished the U.S. Nuclear Regulatory Commission related to radioactive effluents discharged under normal or abnormal operating conditions.
 - (2) Permit the Director of the Occupational Health Division, or his authorized representative, at all times the opportunity to inspect and evaluate sources of radiation and the premises and facilities wherein such sources of radiation are used or stored, and shall make available pertinent data, as well as records and reports as may be required.
 - (3) Grant to the Director of the Occupational Health Division, or his authorized representative, access to all records pertaining to the radiological health and safety of employees, to discharges of radioactive material to the environment, and to any effect of the operation of the facility upon the environment.
 - (4) Notify the Director of the Occupational Health Division, or his authorized representative, of any radiological incident and reports thereof and in the same manner as defined and referred to in 10 CFR 20.403 and 20.405.
 - (5) Permit the Director of the Occupational Health Division, or his authorized representative, to make unscheduled visits to the plant for the purpose of obtaining samples of liquid or gaseous effluents for analysis.

- (6) Upon request by the director of the Occupational Health Division, Vermont Yankee Nuclear Power Station management shall furnish advance notification of each scheduled calibration of effluent monitors and will permit the Director, or his authorized representative, to be present during such calibration.
- (7) Upon request by the Director of the Occupational Health Division, Vermont Yankee Nuclear Power Station management shall share samples of environmental media for purposes of data correlation.

Section 5-307. Notice of violation in writing.

If an inspection indicates that the source of radiation is not in compliance with radiation protection standards herein adopted, the operator or user shall be so notified in writing, with full particulars regarding any deficiencies.

Section 5-308. Enforcement.

- (A) Whenever there are reasonable grounds to believe that there has been a violation of any of the provisions of this regulation, the Board may
 - (1) refer the matter to the Attorney General for proceedings consistent with 18 V.S.A. §1656, or
 - (2) issue an order after affording the alleged violator a hearing or
 - (3) in the event of an emergency, take action consistent with 18 V.S.A. §1655 (b).
- (B) In the event that the Board proceeds under 5-308 (A)(2) above, it shall give written notice of the alleged violation to the violator and shall afford him an opportunity for a hearing. On the basis of the evidence produced at the hearing the Board shall make findings of fact and conclusions of law and enter such order as in its opinion will best further the purposes of this regulation and shall give written notice of such order to the alleged violator and to such other persons as shall have appeared at the hearing and made written request for notice of the order.

Section 5-309. Appeal.

Any person aggrieved by any decision, order, or decree of the State Board, issued pursuant to this regulation, may, within 30 days after receiving notice of such decision, order, or decree, appeal through the ordinary and usual process of law.

Section 5-310. Registration.

- (A) The owner or person having possession of any source of ionizing radiation except those exempted in Section 5-304, or licensed by the U.S. Nuclear Regulatory Commission, shall register each source with the Occupational Health Division, Vermont State Department of Health, within 90 days following the effective date of this regulation and shall register each new source within 30 days after the acquisition of such source. Registration shall be on forms provided by the Division.
- (B) The registrant shall notify the Division within 30 days after any change in address.
- (C) The owner or person having possession of any source of ionizing radiation not exempted in Section 5-304 (a) shall re-register such source very 3 years upon notification by the Director of the Occupational Health Division.

(D) No person, in any advertisement, shall refer to the fact that a source is registered with the Division and no person shall state or imply that any activity under such registration has been approved by the Division.

Section 5-311. Transportation.

- (A) Persons transporting or shipping radioactive materials into, out of, through, or within the state shall provide notification to the Director of Occupational Health prior to such shipment or transport if such shipment or transport meets any of the following criteria:
 - (1) Any shipment or package containing a large quantity of radioactive material as defined in Code of Federal Regulations, Title 49, Part 173, 389 (b), and Title 10, Part 71.4 (f).
 - (2) Fuel elements which have been utilized in a nuclear reactor.
 - (3) Any Fissile Class I, Class II, or Class III package as defined in Code of Federal Regulations, Title 49, Part 173.
 - (4) Any carload, boatload, planeload, or truckload lots of radioactive waste material for disposal.
- (B) The shipper shall supply the following information in writing or by telephone to the Director of Occupational Health at least two working days prior to shipment. Schedule changes or additional information must be provided no later than two hours prior to shipment. To avoid undue hardship the Director may approve other reporting schedules requested by the shipper.
 - (1) Name of shipper.
 - (2) Name of carrier.
 - (3) Type and quantity of radioactive material.
 - (4) Date and time of shipment.
 - (5) Starting point, scheduled route, and destination.
 - (6) Other information required by the Director of Occupational Health.
- (C) Shipments shall be made throughout the state with due regard to public health and safety. The Director of Occupational Health may require changes in dates, routes or time of shipment if necessary to maximize protection to public health and safety. Where possible, the Director shall coordinate such changes with his counterparts in adjoining political jurisdictions.

SUBCHAPTER 2. X-RAY SHOE FITTING

Section 5-321. Prohibition of X-ray Shoe Fitting Devices.

The Vermont State Board of Health hereby prohibits the installation or use of X-ray shoe fitting devices in the State of Vermont.

Source. Regulation on X-ray Shoe Fitting.

Authority. 18 V.S.A. Section 102

Effective Date: June 20, 1957

Preamble. This regulation contained the following preamble;

"WHEREAS, it has been made to appear to the Vermont State Board of Health and the Vermont State Board of Health does hereby find that there is evidence of radiation hazard to the public, particularly to children, from the use of X-ray shoe fitting devices, and

"WHEREAS, it has been made to appear to the Vermont State Board of Health and the Vermont State Board of Health does hereby find that the X-ray shoe fitting devices presently being used by retail shoe stores in the State of Vermont represent a radiation hazard to the public, particularly to children."

VERMONT DEPARTMENT OF HEALTH DIVISION OF HEALTH PROTECTION Radiological Health PO Box 70 108 Cherry Street Burlington, Vermont 05402-0070

Toll Free: 1-800-640-0601 Tel: 802-865-7730 Fax: 802-865-7745